

Amendments to the Claims

1. (Currently amended) An orthosis comprising a single, unitary body ~~made of composite carbon fiber, the unitary body~~ comprising:

a generally spiral-shaped lower leg portion that, when the orthosis is worn, covers at least a portion of the anterior surface of the wearer's lower leg and at least a portion of the posterior surface of the wearer's lower leg; and

a foot plate portion that, when the orthosis is worn, accepts the wearer's foot, wherein the lower leg portion is configured to spiral upward from the foot plate portion and make contact with an anterior surface of the wearer's lower leg prior to making contact with a posterior surface of the wearer's lower leg as the lower leg portion ascends.

2. (Currently amended) The orthosis of claim 1, wherein the foot plate portion comprises:

an anterior section; and

a posterior section,

wherein, when the orthosis is worn, the wearer's toes contact the anterior section and the wearer's heel contacts the posterior section, and wherein the foot plate portion is optionally contoured to complement at least a portion of the plantar surface of the wearer's foot so as to permit the wearer to wear shoes or sandals.

3. (Currently amended) The orthosis of ~~claim 1 or 2~~claim 1, wherein:

the unitary body transfers mechanical energy while the wearer is walking;

the unitary body uses the transferred mechanical energy to stop the wearer's knee from hyperextending; and

the unitary body maintains the wearer's foot in a position that allows the heel of the person's foot to contact the ground before the rest of the wearer's foot.

4. (Currently amended) The orthosis of ~~one of claims 1-3~~claim 1, wherein the lower leg portion comprises an ascending section that extends from the foot plate section and curves toward the anterior surface of the wearer's lower leg to form a shin section.

5. (Currently amended) The orthosis of ~~one of claims 1-4~~claim 4, wherein, from the shin section, the lower leg portion ~~continues to spiral~~spirals around at a least a portion of a lateral surface of the wearer's lower leg and transitions into a calf section.

6. (Currently amended) The orthosis of ~~one of claims 1-5~~claim 5, wherein the calf section terminates in an upper end of the lower leg portion and begins to spiral back toward the anterior surface of the wearer's lower leg.

7. (Currently amended) The orthosis of ~~one of claims 1-6~~claim 1, wherein the angle at which the lower leg portion spirals upward gradually decreases as the lower leg portion nears the calf of the wearer.

8. (Cancelled)

9. (Currently amended) The orthosis of ~~one of claims 1-7~~claim 1, wherein the unitary body comprises:

- an inner surface; and
- a lining material attached to the inner surface.

10. (Original) The orthosis of claim 9, wherein the lining material is removably attached to the inner surface.

11. (Original) The orthosis of claim 9, wherein the lining material is removably attached to the inner surface using Velcro™.

12. (Currently amended) The orthosis of ~~one of claims 1-7~~claim 1, wherein the unitary body is made of composite carbon fiber.

13. (Cancelled)

14. (Cancelled)

15. (Currently amended) The orthosis of ~~one of claims 1-7~~claim 1,
wherein the foot plate portion and the lower leg portion are disposed at an angle with
respect to one another, and
wherein the difference between the angle and 90 degrees is between about 7 degrees
and about 14 degrees.

16. (Cancelled)

17. (Cancelled)

18. (Currently amended) The orthosis of ~~one of claims 1-7~~claim 1,
wherein the foot plate portion and the lower leg portion are disposed at an angle with
respect to one another, and
wherein the difference between the angle and 90 degrees is between about 20 degrees
and about 25 degrees.

19. (Cancelled)

20. (Currently amended) The orthosis of ~~one of claims 1-7~~claim 1,
wherein the foot plate portion comprises a front edge and a back edge,
wherein the back edge is elevated above the front edge.

21. (Currently amended) The orthosis of ~~one of claims 1-7~~claim 1,
wherein the foot plate portion comprises a front edge and a back edge,
wherein the distance between the back edge and ground level is about twice the
distance between the front edge and ground level.

22. (Cancelled)

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23. (Currently amended) The orthosis of ~~one of claims 1-7~~claim 1, wherein the foot plate portion comprises an anterior section and a posterior section, wherein the difference in elevation between the anterior section and the posterior section is greater than 0 centimeters and no greater than about 3 centimeters.

24. – 27. (Cancelled)

28. (Currently amended) The orthosis of ~~one of claims 1-7~~claim 1, wherein the foot plate portion comprises a medial side and a lateral side, wherein the difference in elevation between the medial side and the lateral side is greater than 0 millimeters and no greater than about 10 millimeters.

29. – 32. (Cancelled)

33. (Currently amended) The orthosis of ~~one of claims 1-7~~claim 1, wherein the foot plate portion has a substantially flat outer surface.